

What is claimed is:

1. A method for operating a first optical device that is associated with an information processing device, comprising the steps of:

5 providing a first data signal to said information processing device, wherein said first optical device displays the state of said first data signal crossing an interface associated with said information processing device; and

operating said first optical device other than in accordance with said first data signal.

2. A method, as claimed in Claim 1, further comprising the step of:

10 directing said first data signal toward said first optical device, wherein said operating step comprises blocking or attenuating said first data signal before reaching said first optical device.

3. A method, as claimed in Claim 2, wherein:

15 there is a first electrical path to said first optical device, wherein said blocking step is selected from the group consisting of opening a switch that is disposed in said electrical path, removing a jumper that is disposed in said electrical path, controlling an operating of an AND-gate that is disposed in said electrical path, and any combination thereof.

4. A method, as claimed in Claim 1, further comprising the step of:

directing said first data signal toward said first optical device, wherein said operating step comprises the steps of:

20 changing said first data signal to a second signal, wherein said changing step comprises removing at least some data from said first data signal to form said second signal;

providing said second signal to said first optical device; and

operating said first optical device in accordance with said second signal.

5. A method, as claimed in Claim 4, wherein:

said changing step comprises using an OR-gate to output said second signal in a form of a continuous logic level that maintains said first optical device in a continually on condition.

6. A method, as claimed in Claim 1, further comprising the step of:

5 directing said first data signal toward said first optical device, wherein said operating step comprises the step of filtering said first data signal to define a second signal that is provided to said first optical device.

7. A method, as claimed in Claim 6, wherein:

said filtering step comprises using a low-pass filter.

8. A method, as claimed in Claim 6, wherein:

said filtering step comprises configuring said second signal such that a time duration for any bit in said second signal is at least 1.5 greater than a time duration of any bit in said first data signal.

9. A method, as claimed in Claim 6, wherein:

said filtering step comprises configuring said second signal such that a time duration for any bit in said second signal is at least 2.0 greater than a time duration for any bit in said first data signal.

10. A method, as claimed in Claim 6, wherein:

20 said filtering step comprises requiring a minimum on time for said first optical device that is at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data rate associated with said first data signal.

11. A method, as claimed in Claim 6, wherein:

5 said filtering step comprises requiring a minimum off time for said first optical device that is at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data rate associated with said first data signal.

12. A method, as claimed in Claim 6, wherein:

10 said filtering step comprises requiring a minimum on time for said first optical device that is at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data rate associated with said first data signal; and

15 said filtering step further comprises requiring a minimum off time for said first optical device that is at least 1.5 times greater than said unit interval of at least one of said current data rate or said slowest data rate associated with said first data signal.

13. A method, as claimed in Claim 1, further comprising the step of:

20 directing said first data signal toward said first optical device, wherein said operating step comprises the step of changing said first data signal to a second signal such that a time duration for any bit in said second signal is at least 1.5 times greater than a time duration for any bit in said first data signal.

14. A method, as claimed in Claim 1, further comprising the step of:

20 directing said first data signal toward said first optical device, wherein said operating step comprises the step of changing said first data signal to a second signal such that a minimum time duration for any bit in said second signal is at least 2.0 times greater than a time duration for any bit in said first data signal.

15. A method, as claimed in Claim 1, further comprising the step of:

directing said first data signal toward said first optical device, wherein said operating step comprises the step of changing said first data signal to a second signal such that a minimum on time for said first optical device is at least 1.5 times greater than a unit interval of at least one of
5 a current data rate or a slowest data rate associated with said first data signal.

16. A method, as claimed in Claim 1, further comprising the step of:

directing said first data signal toward said first optical device, wherein said operating step comprises the step of changing said first data signal to a second signal such that a minimum off time for said first optical device is at least 1.5 times greater than a unit interval of at least one of
a current data rate or a slowest data rate associated with said first data signal.

17. A method, as claimed in Claim 1, further comprising the step of:

directing said first data signal toward said first optical device, wherein said operating step comprises the step of changing said first data signal to a second signal such that a minimum on time for said first optical device that is at least 1.5 times greater than a unit interval of at least
one of a current data rate or a slowest data rate associated with said first data signal, wherein said
15 changing step further comprises requiring a minimum off time for said first optical device that is
at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data
rate associated with said first data signal.

18. A method, as claimed in Claim 1, further comprising the steps of:
5 directing said first data signal toward said first optical device, wherein said operating step
comprises the step of changing said first data signal to a second signal such that a minimum on
time for said first optical device is extended to at least a duration of one character in said first
data signal of at least one of a current data rate or a slowest data rate associated with said first
data signal.

19. A method, as claimed in Claim 1, wherein:

10 said operating step comprises turning said first optical device on and off in a pattern that
is not indicative of all data that is embedded in said first data signal, wherein said first optical
device is selected from the consisting of a light emitting diode, a liquid crystal display, an
incandescent, fluorescent, or gas discharge lamp, , an electroluminiscent display, and a cathode
ray tube.

20. A method for operating a first optical device that is associated with an information processing device, comprising the steps of:

providing a first data signal to said information processing device, wherein said first optical device displays a state of said first data signal crossing an interface associated with said
5 information processing device;

changing said first data signal to a second signal, wherein said changing step comprises removing at least some data from said first data signal to form said second signal;

providing said second signal to said first optical device; and

operating said first optical device in accordance with said second signal.

21. A method, as claimed in Claim 20, wherein:

said changing step comprises the step of filtering said first data signal to define said second signal.

22. A method, as claimed in Claim 21, wherein:

said filtering step comprises using a low-pass filter.

23. A method, as claimed in Claim 21, wherein:

said filtering step comprises configuring said second signal such that a time duration for any bit in said second signal is at least 1.5 times greater than a time duration for any bit in said first data signal.

24. A method, as claimed in Claim 21, wherein:

20 said filtering step comprises configuring said second signal such that a time duration for any bit in said second signal is at least 2.0 times greater than a time duration for any bit in said first data signal.

25. A method, as claimed in Claim 21, wherein:

5 said filtering step comprises requiring a minimum on time for said first optical device that is at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data rate associated with said first data signal.

26. A method, as claimed in Claim 21, wherein:

10 said filtering step comprises requiring a minimum off time for said first optical device that is at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data rate associated with said first data signal.

15 27. A method, as claimed in Claim 21, wherein:

said filtering step comprises requiring a minimum on time for said first optical device that is at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data rate associated with said first data signal; and

20 said filtering step further comprises requiring a minimum off time for said first optical device that is at least 1.5 times greater than said unit interval of at least one of said current data rate or said slowest data rate associated with said first data signal.

28. A method, as claimed in Claim 20, wherein:

25 said changing step comprises the step of changing said first data signal to said second signal such that a time duration for any bit in said second signal is at least 1.5 times greater than a time duration for any bit in said first data signal.

20 29. A method, as claimed in Claim 20, wherein:

30 said changing step comprises the step of changing said first data signal to said second signal such that a time duration for any bit in said second signal is at least 1.5 times greater than a time duration for any bit in said first data signal.

30. A method, as claimed in Claim 20, wherein:

5 said changing step comprises changing said first data signal to said second signal such that a minimum on time for said first optical device is at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data rate associated with said first data signal.

31. A method, as claimed in Claim 20, wherein:

10 said changing step comprises changing said first data signal to said second signal such that a minimum off time for said first optical device is at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data rate associated with said first data signal.

15 32. A method, as claimed in Claim 20, wherein:

15 said changing step comprises changing said first data signal to said second signal such that a minimum on time for said first optical device that is at least 1.5 times greater than a unit interval of at least one of a current data rate or a slowest data rate of associated with said first data signal, and wherein said changing step further comprises requiring a minimum off time for said first optical device that is at least 1.5 times greater than a unit interval of at least one of said current data rate or said slowest data rate associated with said first data signal.

33. A method, as claimed in Claim 20, wherein:

20 said operating step comprises turning said first optical device on and off in a pattern that is not indicative of all data that is embedded in said first data signal, wherein said first optical device is selected from the consisting of a light emitting diode, a liquid crystal display, an incandescent, fluorescent, or gas discharge lamp, an electroluminiscent display, and a cathode ray tube.

34. A method for obtaining data from an information processing device, comprising the steps of:

providing a first data signal to said information processing device;

5 displaying a state of said first data signal crossing an interface associated with said information processing device using a first optical device that is associated with said information processing device;

monitoring an optical output of said first optical device;

generating an optical output-based signal from said monitoring step; and

retrieving data from said optical output-based signal from said monitoring step using a computer.

35. A method, as claimed in Claim 34, wherein:

said monitoring step comprises using a telescopic optics.

36. A method, as claimed in Claim 34, wherein:

said retrieving step comprises converting said optical output to an electrical signal and decoding said electrical signal.

37. A method, as claimed in Claim 36, wherein:

20 said converting step comprises directing said optical output to a device selected from the group consisting of one or more photodetectors, photomultipliers, phototransistors, directly by an optical sensor, means for conveying said optical output of said first optical device to an optical sensor, or any combination thereof.

38. A method, as claimed in Claim 36, wherein:

said decoding step comprises providing said electrical signal to a universal synchronous-asynchronous receiver-transmitter.

39. A method, as claimed in Claim 34, wherein:

5 said retrieving step comprises analyzing said optical output-based signal to identify at least one of a first start bit and a first stop bit of a first data signal that is at least substantially replicated by said optical output.

40. A method, as claimed in Claim 39, wherein:

10 said retrieving step further comprises identifying a unit interval used by said first data signal based upon an identification of at least one out of said first start bit and said first stop bit, wherein said unit interval is defined as a time that is used to transmit one bit of information in said first data signal.

41. A method, as claimed in Claim 39, wherein:

15 said start bit is a 0 and said stop bit is a 1.

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42. A method, as claimed in Claim 39, wherein:

5 said first data signal is binary, wherein a start bit of said first data signal is always a first value and a stop bit of said first data signal is always a second value that is different from said first value, wherein said analyzing step further comprises:

executing a first identifying step comprising identifying an occurrence of a change from said second value to said first value and setting this equal to a current start bit candidate;

executing a second identifying step after an identification of said current start bit candidate by said executing a first identifying step and comprising the steps of:

10 identifying a smallest pulse width after said current start bit candidate that corresponds from a change from one of said first and second values to the other of said first and second values; and

15 setting said smallest pulse width as a current unit interval;

decoding said first data signal if said first data signal has one said stop bit a predetermined number of said unit intervals after said current start bit candidate using said current unit interval; and

20 repeating said executing a first and second identifying steps if said first data signal does not have one said stop bit said predetermined number of said unit intervals after said current start bit candidate using said current unit interval.

43. A method, as claimed in Claim 42, wherein:

25 said predetermined number of said unit intervals is selected from the group consisting of 7 or 8.

44. A method, as claimed in Claim 34, wherein:

5 said optical output-based signal is indicative of a first data signal that comprises a plurality of bytes, wherein each said byte is preceded by a start bit and is immediately followed by a stop bit, wherein each said start bit is of a first magnitude and each said stop bit is of a second magnitude that is different from said first magnitude, wherein said retrieving step comprising the steps of:

reviewing said optical output-based signal;

selecting a current start bit candidate from said reviewing step;

identifying a smallest pulse width after said selecting step that corresponds from a change from one of said first and second values to the other of said first and second values;

setting said smallest pulse width equal to a current unit interval;

decoding said first data signal if said first data signal has one said stop bit a predetermined number of said unit intervals after said current start bit candidate; and

15 repeating said reviewing, selecting, identifying, setting and decoding steps if said optical output-based signal does not have one said stop bit said predetermined number of said unit intervals after said current start bit candidate.

45. A method, as claimed in Claim 44, wherein:

20 said decoding step comprises using a universal synchronous-asynchronous receiver-transmitter.

46. A method, as claimed in Claim 44, further comprising the steps of:

modifying a configuration associated with said information processing device so that said optical output of said first optical device is indicative of said first data signal being transmitted to said information processing device.

47. A method, as claimed in Claim 46, wherein:

5 said modifying step comprises changing software used by said information processing device.

48. A method, as claimed in Claim 46, wherein:

5 said modifying step comprises changing hardware used by said information processing device.